



Audit and Enforcement Update January 2001

Audit Findings for January 2001

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DEP BWSC issued 24 Notices of Audit Findings (NOAFs) in January 2001. Eleven NOAFs did not require further assessment/fieldwork. Thirteen NOAFs found response actions lacked sufficient assessment/fieldwork. NOAFs of particular significance in January include:

1. Following an audit of a Class B-1 Response Action outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/Notice of Noncompliance (NON) that identified violations in the actions audited. The site formerly served as a retail gasoline sales and service facility from 1949 through 1987. An existing one-story structure is situated on the site and is currently operated as a restaurant.

In 1987, a soil gas survey of the site confirmed that a release of gasoline had occurred after elevated volatile organic compound concentrations were detected in soil. Former gasoline and waste oil underground storage tanks (USTs) were

removed from the property in May 1988. However, no documentation was provided to DEP regarding assessment or remediation conducted during that time. The site was listed as a confirmed disposal site in 1989. A Waiver of approvals was issued in 1993. On three occasions between 1990 and 1999, the site was assessed through soil boring and monitoring well installations. Light non-aqueous phase liquid (LNAPL) was detected up to 1/8-inch in one monitoring well. Although the assessments confirmed that a release of gasoline had occurred, the source of release remained inconclusive and further assessment of the extent of LNAPL was not conducted.

A release abatement measure (RAM) plan was submitted to DEP in 1997 for soil excavation in the southwest corner of the property [where total petroleum hydrocarbon (TPH) concentrations in soil were measured at 1,300 milligrams per kilogram (mg/kg) in 1995]; however, the RAM was never conducted. In May 2000, a Class B-1 RAO including a Method 1 risk characterization, was submitted to DEP.

Identified violations of MCP requirements include:

- a. failure to define the extent of contamination in soil and groundwater (assessment of LNAPL and extent of TPH contamination in soil);
- b. failure to provide a conservative estimate of the Exposure Point Concentration (EPC) in soil (TPH at a concentration of 1,300 mg/kg was not included in the soil EPC,

- and soil in this area was not evaluated for an EPC);
- c. failure to meet response action performance standards (RAPs) (Photoionization detector (PID) readings of soil samples collected from four soil borings were recorded as greater than 1,500 parts per million (ppm), however, laboratory results were less than S-1 soil standards, and no discussion of the discrepancy between field and laboratory data was included); and
- d. failure to identify all potential exposure pathways.

DEP requested an Audit Follow-up Plan to address the violations.

(Gardner, 2-00706, NON-CE-01-3003, January 3, 2001)

2. Following an audit of a Class A-3 RAO Statement and Activity & Use Limitation (AUL), DEP issued a NOAF/NON requesting retraction of the RAO and termination of the AUL.

Between 1964 and 1990, the site was operated as a hard chrome electroplating facility. In 1990, the business was sold and plating operations continued until 1993. The property is occupied by one building and is bounded by residential properties and a cemetery. From 1964 until 1977, an estimated 250 to 300 gallons per day of rinsewater, including rinsate from the electroplating operations, was directly discharged to an on-site cesspool/boulder-lined excavation. In January 1994, DEP was notified of a release of an unknown quantity of chromic acid at the site that occurred when rainwater contacted

chromium coated vent hoods discarded in dumpsters. An immediate response action (IRA) was conducted to contain and remediate the release, and to determine the extent of impact.

A Class A-1 RAO was filed in May 1994 (3-10488). In May 1996, DEP was notified of reportable concentrations of chromium and lead in soil, excavated from beneath the concrete floor of the building. Between July and December 1996, up to 60 soil samples were collected from multiple depths above bedrock (located between 2-6 feet below grade) at locations beneath and outside the building. Total chromium, hexavalent chromium, and lead were detected at up to 76,300 mg/kg, 3,210 mg/kg, and 25,300 mg/kg, respectively, and showed trends of increasing concentrations with depth. Toxicity Characteristic Leaching Potential (TCLP) data also showed that chromium exceeded the allowable limit for landfilling. Volatile organic compounds were not analyzed, despite their use at the site. Maximum concentrations of chromium were detected in the vicinity of the former plating tanks, a discharge area for a former floor drain, and the discharge area for the former vent hood blowers.

In April 1997, a Phase I report was submitted and the site was classified as Tier II. Samples collected from the residential property, near the former vent hood blowers, showed that total chromium was present at up to 32,000 mg/kg in unpaved soil at depths of 0-1 feet. Between August and October 1997, approximately 12 tons of soil were removed, as a RAM, from areas exhibiting elevated concentrations of total chromium

and lead (a map showing the locations where soil was removed was not provided). Groundwater was assumed to have an average annual depth of greater than 15 feet, however a groundwater investigation was not conducted.

In November 1998, a Class A-3 RAO and AUL including a Method 3 risk characterization, were submitted to DEP. Soil was categorized as S-2 and groundwater was categorized as GW-3.

Identified violations of MCP requirements include:

- a. failure to continually assess and evaluate release and site conditions to determine if an IRA is required (sufficient information was available to indicate that hexavalent chromium may exist in the unpaved surface soils of the residential property at concentrations which may pose an Imminent Hazard);
- b. failure to submit timely RAM status reports (three RAM status reports were not submitted);
- c. failure to provide information required to be contained in a Phase I report or to provide technical justification for not doing so (several potential OHM storage and/or disposal areas, including the cesspool/boulder lined excavation, were not depicted. VOCs were also not evaluated);
- d. failure to provide the scope and level of effort of site characterization commensurate with the complexity of the disposal site or sufficient to conduct the risk

- characterization (the horizontal extent of soil contamination was not adequately defined and the decision to forego a groundwater investigation was not technically justified);
- e. failure to identify current human receptors (reports submitted to DEP failed to indicate that a portion of the disposal site is a residential property);
 - f. failure to identify and describe all potential Exposure Points (the commercial/industrial portion and the residential portion of the site were treated as the same soil exposure point; however an AUL restricting residential use, was placed only on the commercial/industrial portion of the site);
 - g. failure to identify Exposure Pathways;
 - h. failure to determine or estimate an EPC which provides a conservative estimate of the concentrations contacted by a receptor at the Exposure Point over the period of exposure;
 - i. failure to determine proper soil categories;
 - j. failure to submit all mathematical equations used to calculate risks;
 - k. failure to clearly and accurately delineate the boundaries of a site, or portion of a site, identified in a RAO;
 - l. failure to eliminate or control the source for achievement of a RAO (the cesspool/boulder lined excavation was not evaluated as a potential source and contaminated soil may be acting as a continuing

source to groundwater).

During the audit site inspection, DEP issued a field Notice Of Responsibility (RTN 3-19984) requiring that an Imminent Hazard evaluation be conducted at two residential properties (refer to violation a). DEP requested a written retraction of the Class A-3 RAO and Termination of the AUL. In addition, a Phase II Comprehensive Site Assessment Scope of Work aimed at correcting the cited violations was requested. (Rockport, 3-13779, NON-NE-01-3A002, January 8, 2001)

3. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF that did not identify violations in the actions audited that required correction.

The site is located at a 0.6-acre property currently used as a utility switching facility. Upon removal of a 1,500-gallon diesel fuel underground storage tank (UST) in February 1995, a 72-hour release condition was documented through soil headspace readings by photoionization detector (PID) in excess of 100 parts per million (ppm). Following release notification, a verbal IRA approval was granted for the removal of impacted soil. The tank grave was excavated to a depth of 11 feet. Six post-excavation confirmatory samples were collected for laboratory analysis. Groundwater was encountered at approximately 9 feet with a discontinuous sheen. A water sample was collected from the excavation for laboratory analysis. Approximately 2.8 tons of petroleum-impacted soil was transported off site for recycling. In August 1995, assessment of the site

included the installation of four soil borings, with three completed as groundwater monitoring wells.

In December 1995, a Class A-2 RAO, including a Method 1 risk characterization, was submitted to DEP. Analytical results of soil and groundwater media for VOC, TPH and polynuclear aromatic hydrocarbons (PAHs) were below their applicable Method 1 standards. A condition of no significant risk for the diesel fuel release was determined to have been achieved. (Peabody, 3-12169, January 11, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address:
<http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - January 2001

In January 2001, DEP BWSC issued 37 NONs, 1 Administrative Consent Order with Penalty (ACOP), and 2 Penalty Assessment Notices (PANs). Enforcement actions of particular significance in January include:

1. DEP issued a demand letter for \$7,500 in stipulated penalties to the owner of Gervais Auto in Ware, for failing to comply with a previous ACOP. The owner had agreed to hire a Licensed Site Professional and investigate a gasoline release on her property, which is located near Ware 's public water supply. The owner later claimed financial inability but failed to document a hardship. DEP has informed the owner and operators of the business that the state will hire a contractor and bill them for assessment and cleanup work if they continue to ignore their obligations as potentially

responsible parties. (Ware, 1-0718, SPAN-WE-98-3001-STP, January 3, 2001)

2. DEP issued a Penalty Assessment Notice (PAN) to K&P Transportation Services Inc. (K&P) of Norwalk, California for failure to notify DEP within two hours of a sudden release of oil on its property in Charlton, MA. A penalty of \$15,000 was assessed. (Charlton, 2-13287, PAN-CE-01-3004, January 26, 2001).

3. DEP entered into an Administrative Consent Order with Penalty (ACOP) with the Estate of Steven W. Kantany of Groton, to address comprehensive response action deadlines for the assessment and cleanup of a waste oil release at an auto sales & service dealership in Westfield, MA. A penalty of \$7,500 was assessed with \$6,500 suspended pending compliance with the ACOP. The Estate of Steven W. Kantany agreed to an enforceable schedule for completing its obligations. (Westfield, 1-0343 & 1-10066, ACOP-WE-01-3002, January 31, 2001).

Additional information on DEP's current enforcement actions and policies can be found on our web page at the following address:

<http://www.state.ma.us/dep/enf/enforce.htm>.

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DEP BWSC issued 30 Notices of Audit Findings (NOAFs) in February 2001. Twelve NOAFs did not require further assessment/fieldwork. Eighteen NOAFs found response actions lacked sufficient assessment/fieldwork. NOAFs of particular significance in February include:

1. Following an audit of a Class A-3 Response Action Outcome (RAO) Statement and Activity & Use Limitation (AUL), DEP issued a Notice of Audit Finding (NOAF) that found no violations in the actions audited.

The site is located within a 15-acre utility substation property adjacent to a transformer. The substation is covered by a 6-inch layer of crushed stone and is surrounded by a chain-link fence. In November 1993, a soil assessment of the substation was conducted for the presence of mineral oil dielectric fluid (MODF). Petroleum hydrocarbons were detected in soil adjacent to the transformer at a concentration exceeding the applicable reportable concentration. The release

condition was reported to DEP in December 1993. The source was believed to be associated with historical releases from the transformer.

A Phase I investigation of the site included the advancement of seven soil boring/monitoring wells, and eight test pits. Groundwater was encountered at 6 feet below grade. Results of the investigation confirmed the presence of petroleum hydrocarbons, but neither volatile organic compounds (VOC) nor polychlorinated biphenyls (PCBs) were detected.

In May 1997, a Release Abatement Measure (RAM) was conducted, including the excavation and disposal of approximately 157 tons of impacted soil. Total extractable petroleum hydrocarbon concentrations in post-excavation soil samples ranged from 10 milligrams per kilogram (mg/kg) to 15,480 mg/kg.

In March 1998, a Class A-3 RAO and AUL, including a Method 3 risk characterization, was submitted to DEP. Soil at the site was categorized as S-2 and S-3. Groundwater was categorized as GW-2 and GW-3. The Method 3 risk characterization identified no significant risk for current receptors (including trespassers, site maintenance/excavation workers) and potential future commercial workers. A Stage I Environmental Screening was performed to evaluate ecological risk. A Stage II Screening was not recommended. The AUL permits commercial and industrial activities, and construction activities, including subsurface excavation. Obligations and conditions include preparing and implementing a soil management plan for construction, excavation, or disturbance of soils located within the AUL area.

(Beverly, 3-10732, February 6, 2001)

2. Following an audit of a Phase II (PHII), Phase III (PHIII), and Class C RAO Statement, DEP issued a NOAF/NON that identified violations in the actions audited.

The site is located at a 1.4-acre industrial facility occupied by a sheet metal building constructed in 1940. The building has been used for a machine shop, metal testing, and chemical processing facility. A brook is located approximately 750 to 1,000 feet downgradient of the site.

In 1996, DEP received a release notification for trichloroethylene (TCE) in groundwater. Phase I and PHII site investigation activities included installing eight shallow monitoring wells and three deep monitoring wells. Elevated levels of TCE, the primary contaminant detected at the site, were detected in shallow and deep groundwater, and in two surface water samples from downgradient locations. A site-wide groundwater velocity of 1.9 ft/day (693 ft/year) was calculated. The source of TCE in groundwater was surmised to be leakage from floor drain lines within the building. The majority of the site is in an area where groundwater is classified as GW-3. However, a portion of the TCE plume extends into a GW-1 area that is not currently used for public drinking water supplies.

The Method 1 risk characterization performed in conjunction with a Method 3 Stage I Environmental Screening documented a condition of no significant risk for soils and groundwater on the subject property. However, a condition of no significant risk was not achieved for the portion of the release located in a GW-1 area. The PHIII report outlined various remedial options for the GW-1 portion of the release and determined that no "active" remedial options were likely to be effective at achieving a permanent solution for groundwater contamination at the site in a timely manner and that the incremental benefits of

contaminant reduction would not justify the associated cost. Therefore, the alternative selected was monitored natural attenuation. The report identified the primary natural attenuation mechanisms at the site as dispersion, dilution and, to a lesser extent, sorption and volatilization. In November 1999, a Class C RAO was submitted to DEP.

Identified violations of MCP requirements include:

- a. failure to conduct Immediate Response Actions for conditions of SRM;
- b. failure to conduct adequate site investigations required for risk characterization;
- c. failure to address potential migration pathways (indoor air impacts);
- d. failure to define the horizontal and vertical extent of contamination;
- e. failure to apply appropriate PHIII evaluation criteria [Various remedy alternatives were not selected, in part, because they were unlikely to reduce contamination to levels that are below Method 1 standards or approach background. The remedial alternative selected relied primarily on dilution of contaminants. The MCP requires remedial actions to reduce the overall mass and volume of oil and/or hazardous material to the extent feasible, regardless of whether it is feasible to achieve a Permanent Solution or Temporary Solution or achieve background for the site. These processes do not result in a reduction of contaminant mass or volume.];
- f. failure to identify all potential receptors under current and foreseeable future site uses; and
- g. failure to meet the Response Action Performance Standard.

DEP requested 1) a determination that a Condition of SRM does not exist, supported by data and calculations, or an Immediate Response Action Plan to address the SRM condition; 2) an Audit Follow-up Plan to conduct supplemental PHII investigations, 3) a PHII addendum report within 1 year, and 4) if applicable, a revised PHII and RAO, or retraction of the RAO with the PHII addendum and continuation of response actions.

(Chicopee, 1-11555, NON-WE-01-A3029, February 16, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address:
<http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - February 2001

In February 2001, DEP BWSC issued 29 NONs, 3 Administrative Consent Orders with Penalty (ACOPs), and 1 Administrative Consent Order (ACO).

Enforcement actions of particular significance in February include:

1. DEP entered into an Administrative Consent Order with Penalty (ACOP) with Temp-Pro Inc. for conducting response actions at a contaminated property in Northampton without the necessary state approvals or oversight by a Licensed Site Professional. Temp-Pro Inc. agreed to pay a \$1,000 penalty. An additional penalty of \$8,000 will be imposed if the company fails to appropriately complete and document response actions. (Northampton, 1-1072, ACOP-WE-00-3A017, February 5, 2001)
2. DEP entered into an ACOP with the Kogut North Farm Nursery Partnership of Meriden, CT, to address comprehensive response action and

Release Abatement Measure (RAM) deadlines for assessing and cleaning a release at its property in Hatfield, MA. A penalty of \$1,000 was assessed, with \$6,500 suspended pending compliance with the ACOP. North Farm Nursery Partnership agreed to an enforceable schedule for completing its obligations. (Hatfield, 1-0010136, ACOP-WE-01-3001, February 9, 2001).

3. DEP entered into an ACOP with New England Log Buyers Inc. of Stow for failing to report a hazardous materials release to DEP within 2 hours, as required, and subsequently failing to perform an Immediate Response Action (IRA) in a timely manner. New England Log Buyers Inc. agreed to pay a \$2,000 penalty. (Stow, 2-12639, ACOP-CE-01-3006, February 26, 2001).

Additional information on DEP's current enforcement actions and policies can be found on our web page at the following address:

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DEP BWSC issued 24 Notices of Audit Findings (NOAFs) in March 2001. Eleven NOAFs did not require further assessment/fieldwork. Thirteen NOAFs found response actions lacked sufficient assessment/fieldwork. NOAFs of particular significance in March include:

1. Following an audit of an Immediate Response Action (IRA) and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/Notice of Noncompliance (NON) that identified violations in the actions audited and requested retraction of the RAO Statement. The site is located at a private residence/former dairy farm. A potable drinking water well is present on the property. In February 1999, DEP received oral notification of a sudden release of approximately 40 gallons of waste oil to the ground surface from a tipped over drum. Following release notification, a verbal IRA approval was granted, which included the application of absorbents and polyethylene sheeting and the removal of up to 75 cubic yards (cy) of contaminated soil. A release notification

form received in April 1999 also reported the release of lead at a concentration of 5,500 milligrams per kilogram (mg/kg). Completed IRA activities included the removal of approximately 12 cy of waste oil-contaminated soil and one 55-gallon drum of lead-contaminated soil. The excavation was completed to a maximum depth of 4.5 feet. Five composite confirmatory samples and one grab sample were collected from the excavated area at various depths up to a depth of 4.5 feet. Two composite samples were analyzed for petroleum-related compounds. The grab sample and three additional composite samples were analyzed for lead. Nine grab samples were collected outside of the excavated area to a depth of 2 feet for analysis of lead. Residual petroleum-related compounds were below applicable MCP Method 1 standards. Lead was detected in post excavation samples up to 827 milligrams per kilogram (mg/kg). Lead was detected outside of the excavation up to 1,120 mg/kg. In June 1999, DEP received a Class B-2 RAO, including a Method 1 risk characterization. Groundwater was categorized as GW-1, GW-2 and GW-3. Soil was categorized as S-1. Lead was not evaluated in the risk characterization and Exposure Point Concentrations (EPCs) for lead were not identified. Identified violations of MCP requirements include: a) failure to achieve a permanent solution (lead is present in soil above applicable Method 1 standards); b) failure to adequately characterize the vertical and horizontal extent of contamination; c) failure to identify the EPC for lead; and d) failure to furnish information requested by DEP in a Request for Information (RFI). DEP requested retraction of the RAO and submittal of a Tier Classification and Tier I permit. In addition, DEP requested submittal of an IRA Plan and Imminent Hazard Evaluation. (Cummington, 1-12824 & 1-13723, NON-WE-01-3A023, March 2, 2001)

2. Following an audit of an IRA and Class A-2

RAO, DEP issued a NOAF that found no violations in the actions audited. The site is located within a public works facility currently used for vehicle and equipment maintenance. Upon removal of a 4,000-gallon gasoline underground storage tank (UST) in April 1999, a release condition was observed and reported to DEP. Following release notification, a verbal IRA approval was granted for the removal of up to 100 cy of contaminated soil, the recovery and proper disposal of contaminated groundwater from the excavation, assessment activities to determine the extent of groundwater contamination, and confirmatory soil sampling. Approximately 30 cy of contaminated soil and 1,511 gallons of contaminated groundwater were removed from the excavation. Four post-excavation confirmatory samples were collected for laboratory analysis of petroleum-related compounds. Groundwater was encountered at approximately 4 feet below grade. Assessment of the site included the installation and sampling of three soil borings completed as groundwater monitoring wells. In August 1999, a Class A-2 RAO, including a Method 1 risk characterization, was submitted to DEP. The RAO covers the portion of the property defined by the limits of the soil excavation. Soil was categorized as S-3 and groundwater was categorized as GW-2 and GW-3. All soil and groundwater EPCs were below the applicable Method 1 standards (including S-1 soil standards). The RAO concluded that a level of No Significant Risk to health, safety, public welfare, and the environment has been achieved. On the basis of the information reviewed during the audit and in reliance upon the accuracy of that information, DEP did not identify any noncompliance of MCP requirements. (East Longmeadow, 1-12883, March 9, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address:

<http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - March 2001

In March 2001, DEP BWSC issued 35 NONs, and 3 Administrative Consent Orders with Penalty (ACOPs). Enforcement actions of particular significance in March include:

1. DEP entered into an Administrative Consent Order with Penalty (ACOP) with O'Connell Oil Associates, Inc. (O'Connell) of Pittsfield, MA for failure to undertake and complete assessment and cleanup of petroleum contamination at a gasoline station site in Chicopee, MA. A penalty of \$2,000 was assessed. O'Connell agreed to an enforceable schedule for completing its obligations. (Chicopee, 1-10716, ACOP-WE-01-3003, March 20, 2001)
2. DEP entered into an ACOP with JABAR Inc. of Ashby, MA for submitting incomplete and inaccurate reports on the assessment of a contaminated site, and conducting response actions without the agency's prior approval. A penalty of \$4,500 was assessed. (Ashby, 2-13149, ACOP-CE-01-3003, March 20, 2001)
3. DEP entered into an ACOP with the Tyree Organization Ltd. (Tyree) of Shrewsbury, MA, for conducting waste site cleanup work without notifying DEP or obtaining approval from the agency. A penalty of \$9,500 was assessed. (Shrewsbury, 2-13200, ACOP-CE-01-3007, March 22, 2001)

Additional information on DEP's current enforcement actions and policies can be found on our web page at the following address:

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DEP BWSC issued 33 Notices of Audit Findings (NOAFs) in April 2001, of which 10 required additional assessment and fieldwork, primarily to support the submitted Response Action Outcome (RAO) Statement or to conduct additional remedial actions. Twenty-three audits determined that no additional action was needed.

1. Following an audit of a Class B-1 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON) that requested either the conduct of additional response actions or the retraction of the RAO.

The site is located at a gasoline sales and service station property. Available information indicates that underground storage tanks (USTs) for gasoline, fuel oil, and waste oil have been present on the property since 1959. Three of four gasoline USTs were removed and replaced in 1985. Gasoline contamination was identified in

groundwater at the downgradient property to the north.

A 1996 assessment of the property indicated the presence of "sheens and strong petroleum odors" in three of seven soil borings installed. Composite soil samples collected from two of the borings for analysis of Total Petroleum Hydrocarbon (TPH) and volatile organic compounds (VOCs) were below applicable S-1/GW-2/3 cleanup standards. Three borings were constructed as monitoring wells. Groundwater sampling results indicated the presence of TPH up to 42.9 parts per million (ppm) and xylenes up to 10.6 ppm. Additional groundwater monitoring for VOCs was conducted in March 1997; only Methyl tert-butyl ether (MTBE) was identified at a concentration of 39 parts per billion (ppb).

DEP received a Class B-1 RAO with a Method 1 risk characterization in May 1997.

Identified violations of MCP requirements include:

- a. failure to provide a conservative estimate of Exposure Point Concentrations (specifically, soil EPCs used in the risk characterization were from "composite" soil boring samples where no information was presented on how and where samples were collected, and although field observations indicated "black soil saturated with strong odor (of gas or fuel oil) and gloss" on one composite sample, analytical results were non-detect for this sample.);
- b. failure to eliminate or control source areas (the source of TPH contamination has not been confirmed.);
- c. failure to support a RAO by assessments and evaluations of sufficient scope, detail and level of effort to characterize risk

- (TPH analysis for groundwater was conducted in 1996, but eliminated in two subsequent sampling rounds in 1997.); and
- d. failure to define RAO boundaries (site diagram that clearly and accurately delineated the area subject to the RAO was not provided.)

(North Adams, 1-11332, NON-WE-01-3A005, April 3, 2001)

2. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF/NON that requested additional assessment and evaluation of risk. The site is located at a local town municipal office complex that abuts a river. Surrounding property includes residential and recreational open space.

In May 1997, DEP received notification of free-phase gasoline leaching from an embankment to the river as a 2-hour reporting condition. The release was attributed to UST distribution piping. Verbal IRA approval was granted for: 1) deploying absorbent booms, 2) draining the UST, 3) testing the tightness of the gasoline UST and piping, and 4) conducting a soil gas survey. One gasoline dispenser pump was removed and replaced.

In July 1997, DEP rejected an IRA Completion Statement because it did not address the continuing gasoline migration into the river. Additional IRA activities included river boom installation and subsurface assessment. Eight soil borings/monitoring wells were installed between 1998 and 2000 as part of the assessment. Concentrations of Volatile Petroleum Hydrocarbons (VPH) and associated analytes in soil were below Method 1 S-1 soil standards.

1998 groundwater sampling results identified

Methyl tert-butyl ether in groundwater at 420,000 parts per billion (ppb) within 120 feet upgradient of the river. Surface water and sediment were not sampled. Hydraulic conductivities and groundwater velocity were not monitored to evaluate migration rates. Four groundwater sampling events were conducted between 1999 and 2000 where contaminant concentrations did not exceed applicable Method 1 GW-2 and GW-3 standards.

In May 2000, DEP received a Class A-2 RAO with a Method 1 risk characterization. Identified violations of MCP requirements include:

- a. failure to conduct appropriate scope and type of Immediate Response Actions (IRAs) (except for absorbent boom deployment, the IRA did not contain or control migration of gasoline to surface water from the time of notification to submittal of the RAO.); and
- b. failure to meet performance standards for RAOs (the UST distribution piping from which the release was attributed was neither removed nor evaluated as the source area. Subsurface utilities were not evaluated, and the extent of subsurface groundwater contamination was not defined past the river. Surface water and sediment sampling were not conducted, and the location of the product breakout to the River was not depicted on available maps. Additional potential receptors, including a possible nearby irrigation well, should have been evaluated).

(Blackstone, 2-11725, NON-CE-01-3043, April 27, 2001)

3. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF that found that response actions were performed in compliance

with the requirements of the MCP, and the information submitted to DEP adequately documented those actions.

The site is located at a petroleum sales and service station situated in a commercial and residential area. No reported public or private water supplies are present in the site area. During removal of two gasoline underground storage tanks (USTs) in November 1998, DEP received notification of a 72-hour release condition that was documented through soil headspace readings by photoionization detector (PID) in excess of 100 parts per million (ppm).

Following release notification, a verbal IRA approval was granted for the removal of gasoline-contaminated soils. A subsequent IRA plan proposed the installation of soil borings and monitoring wells to assess the need for soil removal. Five soil borings and four monitoring wells were installed in January 1999. Soil sampling analytical results indicated volatile petroleum hydrocarbon (VPH) and lead at concentrations above applicable Method 1 S-1/GW-2 and S-1/GW-3 standards. Based on this assessment, approximately 912 tons of contaminated soils were excavated from the site. Confirmatory soil samples were obtained from the limits of the excavation to determine the effectiveness of the soil removal.

In October 1999, DEP received a Class A-2 RAO with a Method 1 risk characterization. Contaminants of concern at the site remain at concentrations below applicable soil and groundwater standards. Reduction of contaminant concentrations to background conditions was not considered feasible.

(Gardner, 2-12505, April 23, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address:

<http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - April 2001

In April 2001, DEP BWSC issued 58 NONs, 1 Administrative Consent Order (ACO), and 1 Administrative Consent Order with Penalty (ACOP). Enforcement actions of particular significance in April include:

1. DEP entered into an Administrative Consent Order (ACO) with Mr. Ernie Booth, the operator of Ernie's Texaco in Northampton for failing to address comprehensive response action and Release Abatement Measure (RAM) deadlines for assessing and cleaning a release at his property. Mr. Booth agreed to complete the necessary response actions, submit reports to DEP in a timely manner, and pay stipulated penalties if he fails to meet his obligations under the agreement.

(Northampton, 1-0274, ACOP-WE-01-3004, April 3, 2001).

2. DEP entered into an Administrative Consent order with Penalty (ACOP) with Berkshire Gas of Pittsfield for proceeding with cleanup of a former coal gas site in Greenfield without adequate air monitoring and emission controls to prevent impacts to nearby residences. Berkshire gas also failed to obtain a permit extension from DEP or submit a complete remediation design plan. Berkshire Gas and their remedial consultant ThermoRetec agreed to pay a \$15,000 penalty. Berkshire Gas and TheroRetec agreed to complete remaining work at the site with proper approvals, monitoring and controls to prevent air emissions and odor impacts to nearby residences.

(Greenfield, 1-0080, ACOP-WE-01-3004, April 13, 2001).

3. DEP entered into an ACO with Coca-Cola Enterprises (Coca-Cola) of Fall River for failure to meet state waste site assessment and cleanup requirements and deadlines. Coca-Cola signed an agreement to complete response actions at its property before the end of 2001.

(Fall River, 4-1071, ACO-SE-01-3T001, April 24, 2001).

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Revised July 10, 2001



waste site cleanup



Audit and Enforcement Update for May and June, 2001

Audit Findings for May and June 2001:

DEP BWSC issued 71 Notices of Audit Findings (NOAFs) in May and June 2001, of which 33 required additional information, assessment, and/or fieldwork, primarily to support the submitted Response Action Outcome (RAO) Statement or to conduct additional remedial actions. Thirty-eight audits determined that no additional action was needed.

1. Following an audit of an Immediate Response Action and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON) that requested either the conduct of additional response actions or the retraction of the RAO.

The site is located at a maintenance garage property, which includes a one-story building. A stream and hand driven well point (for potable water service) is located within 30 feet of the garage. In March 1998, during removal of a 500-gallon abandoned (removed from service in 1988) gasoline underground storage tank (UST), DEP received notification of a 72-hour release condition that was documented through soil headspace readings by photoionization detector (PID) in excess of 100 parts per million (ppm). Following release notification, a verbal IRA approval was granted to remove up to 100 cubic yards of gasoline-impacted soil and sample the adjacent private water supply well. Excavation was completed between 5 and 10 feet below grade. Groundwater was observed at 9.5 feet. Soil analysis of four sidewall and a bottom soil sample indicated the presence of soil contamination above applicable Method 1 standards at the northeast sidewall and bottom sample locations. Five groundwater monitoring wells were installed and quarterly groundwater monitoring was conducted for Volatile Petroleum Hydrocarbons (VPH), volatile organic compounds (VOC), and lead. VOC and lead were detected in groundwater. Ten additional soil borings were installed to further define the extent of contamination. Two soil samples were collected for analysis of VPH, VOC, and lead, and were found to be below applicable Method 1 standards. The hand-driven well point was not found; therefore, on two occasions surface water samples were collected for VPH, VOC, and lead in the vicinity of its reported location. No contaminants were detected. DEP received a Class A-2 RAO with a Method 3 risk characterization in March 2000. The risk characterization assumed potential future residential use of the site. The lead in groundwater was dropped from consideration in the risk characterization because its presence was attributed to background conditions.

Findings

Identified violations of MCP requirements include:

- a. Failure to provide 120-day notification of the presence of lead in groundwater;
- b. Failure to achieve a level of no significant risk in support of a RAO (concentrations of lead in groundwater exceed applicable Method 1 standards); and
- c. Failure to ensure that analytical data used in support of conclusions or LSP opinions are scientifically valid and defensible (the laboratory reporting limit for lead was above the applicable Method 1 standard).

(West Stockbridge, 1-12865, NON-WE-01-3A042, May 30, 2001)

2. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF that found that response actions were performed in compliance with the requirements of the MCP, and the information submitted to DEP adequately documented those actions.

The site is located within property occupied by a residential dwelling and a fuel oil dispensing and petroleum underground storage facility. While four fuel-oil and kerosene underground storage tanks (USTs) were being removed in July 1998, DEP received notification of a 72-hour release condition that was documented through soil headspace readings by photoionization detector (PID) in excess of 100 parts per million (ppm). IRA activities included the removal of up to 700 cubic yards of soil and photoionization detector screening in basements of four adjacent residential properties. One of the four post-excavation soil samples collected (three sidewalls and the base) indicated petroleum impacts above applicable Method 1 S-1 soil standards. Six monitoring wells were installed between April and June 1999. Results of up to two rounds of a groundwater evaluation did not indicate the presence of groundwater impacts above applicable GW-3 standards. GW-2 exceedences were observed at two monitoring locations. As a result, a level 1 soil gas screening was conducted in the basement of the on-site dwelling. The soil gas screening was conducted in consideration of DEP-issued guidance. Results of the soil gas screening indicate that significant vapor phase impacts on indoor air quality are unlikely. In July 1999, DEP received a Class A-2 RAO with a Method 2 risk characterization.

(Worcester, 2-12318, June 8, 2001)

3. Following an audit of a Phase I - Initial Site Assessment Report and Transition Opinion Class A-2 RAO equivalent statement, DEP issued a NOAF/NON that requested submittal of a RAO that complies with the requirements of the MCP or retraction of the Transition Opinion and Tier Classification of the site.

The site is located at a municipal highway garage used to store and service highway maintenance and repair equipment. The site is serviced by public water and wastewater is disposed of in a septic system. The site is located within a Zone II area of contribution for two municipal water supply wells. The site was first listed as a Location To Be Investigated in April 1991 as a result of a 1,000-gallon gasoline UST failure, which occurred in March 1990. The UST was removed and groundwater exhibiting a slight sheen was encountered at 2.5 feet below grade. Impacted soil was excavated for disposal in March and May 1990. Assessment of the site included

installing four monitoring wells, test pitting and soil boring advancement, and testing a previously installed monitoring well used in the vicinity of the site for a hydrogeologic investigation. Gasoline-related VOC compounds, as well a chlorinated VOC, were identified in three of the five wells at levels exceeding the Method 1 GW-1 standards. In September 1990, DEP received a Phase I report. The report identified floor drains, which formerly discharged to a dry well, that were subsequently rerouted to a drainage ditch. Four additional "direct-push" monitoring wells were installed and sampled in December 1997. Trimethylbenzenes were detected in one well. In April 1998, DEP received a Transition Opinion indicating that the site was a location of a release but response actions met the requirements for a Class A-2 RAO. The submittal included a combined Method 1 and Method 2 risk characterization.

Findings

Applicable soil categories were not identified. Exposure Point Concentrations (EPCs) for contaminants in soil were not identified. The EPCs used for the contaminants in groundwater were the analytical results obtained from the 1997 sampling round. Method 2 standards for trimethylbenzenes were presented; however, the calculations for the derivation of the Method 2 standards were not provided. An evaluation of historical groundwater data was not included. Identified violations of MCP requirements include:

- a. Failure to support an RAO by assessments and evaluations of sufficient scope, detail, and level of effort to characterize risk [volatile petroleum hydrocarbon (VPH) analysis not performed on soil and groundwater, investigation of dry well not conducted];
- b. Failure to meet applicable Method 1 GW-1 standards for groundwater in support of a condition of No Significant Risk;
- c. Failure to identify EPCs in soil;
- d. Failure to identify applicable soil and groundwater categories;
- e. Failure to document Method 2 standard development and calculations;
- f. Failure to use scientifically valid and defensible data;
- g. Failure to identify the boundaries of the disposal site to which the RAO applies;
- h. Failure to submit original Bill of Lading to DEP;
- i. Failure to respond to DEP Request for Information;
- j. Failure to meet deadline for submittal of Transition site Opinion.

(Lanesborough, 1-00789, NON-WE-01-3A083, June 28, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address: <http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - May and June 2001

In May and June 2001, DEP BWSC issued 97 NONs, 9 Administrative Consent Orders (ACOs), 8 Administrative Consent Orders with Penalty (ACOPs), 2 Penalty Assessment Notices (PANs), and 2 Unilateral Administrative Orders (UAOs). Enforcement actions of particular significance in May and June include:

1. DEP issued a Standard Penalty Assessment Notice (SPAN) and Unilateral Administrative Order (UAO) to Bedford Street Realty Trust of East Bridgewater for failure to complete cleanup actions in a timely manner, including failure to submit a Response Action Outcome (RAO) or Tier Classification submittal by the one-year anniversary of a release at its property. Bedford Street Realty Trust was previously cited for not meeting its regulatory obligations and subsequently stopped showing good faith efforts to complete cleanup work. The UAO orders Bedford Street Realty Trust to perform response actions and comply with MCP submittal requirements. A penalty of \$7,000 was assessed.
(East Bridgewater, 4-14476, SPAN-SE-01-3T-001, May 16, 2001).
2. DEP entered into an Administrative Consent Order (ACO) with Chudy Oil Co. of Palmer, MA for failure to complete required response actions at a site where several releases of heating oil took place. A penalty of \$7,000 will be suspended if Chudy satisfactorily completes all required response actions within the agreed upon timelines.
(Palmer, 1-10269, ACO-WE-01-3007, June 5, 2001).
3. DEP issued a Unilateral Administrative Order (UAO) with a Civil Administrative Penalty to Rockland Industries of Braintree, MA for performing a Release Abatement Measure on its property in Middleborough, MA, a Tier 1A disposal site, without submitting plans to the agency or adequately participating in the public involvement process. DEP fined Rockland Industries \$16,000 and ordered the company to submit plans addressing excavation in contaminated soil, groundwater monitoring, wetlands impacts and the possible planting of a tree species known to uptake contamination. DEP also ordered Rockland Industries to allow for public comment.
(Middleborough, 4-0111, UAO-SE-01-3P-001, PAN-SE-01-3P-001, June 12, 2001)

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Audit and Enforcement Update for July, 2001

Audit Findings for July 2001:

DEP BWSC issued 23 Notices of Audit Findings (NOAFs) in July 2001. Seventeen required additional information, assessment, and/or fieldwork, primarily to support the submitted Response Action Outcome (RAO) Statement or to conduct additional remedial actions. Six audits determined that no additional action was needed

1. Following an audit of a Release Abatement Measure (RAM) and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON) that requested either the conduct of additional response actions to support the RAO or a retraction of the RAO.

The site is located at a gasoline sales and service station property that has operated in this manner since 1925. In March 1990, DEP was notified of the presence of light non-aqueous phase liquid (LNAPL) on groundwater at the site that was discovered through an environmental assessment. The release was attributed to leaking underground storage tanks reportedly removed from the property in 1988. Between 1990 and 1991, a short-term measure (STM) was conducted, which included hand bailing up to 48 gallons of LNAPL and water. In 1991, a Phase I report was completed. DEP received a Tier II Classification of the site in December 1996. Assessment activities included the advancement of eight soil borings, which were completed as monitoring wells. An air-sparging and soil vapor extraction system was operated on the site as an STM from 1992 through 1997. In 1997, twelve additional soil samples were collected through direct-push technology. A RAM was conducted in 1997 for the excavation and removal of 33 cubic yards of oil-contaminated soil from the location of the former waste oil UST. Oxygen releasing compounds were applied at the base of the excavation. Eight rounds of groundwater monitoring were conducted between 1989 and 1997. In April 2000, DEP received a Class A-2 RAO with a Method 1 risk characterization.

Findings

Identified violations of MCP requirements include:

- a. Failure to support the RAO with an adequate definition of the horizontal and vertical extent of oil contamination in soil downgradient of the RAM area; and
- b. Failure to support the RAO by an adequate characterization of oil and/or hazardous materials at the disposal site (assessment of the site for Volatile

Petroleum Hydrocarbons, and not just target analytes, and for Extractable Petroleum Hydrocarbons in areas of the site other than the RAM excavation, should have been conducted for an RAO filed in 2000). (Easthampton, 1-00776, NON-WE-3A062, July 2, 2001)

2. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF that found that response actions were performed in compliance with the requirements of the MCP, and the information submitted to DEP adequately documented those actions. The site is located at a manufacturing facility in an industrial-zoned area. During removal of a bunkered 5,000-gallon fuel oil underground storage tank (UST) in April 1999, headspace readings by photoionization detector (PID) of 35 to 45 parts per million (ppm) prompted removal of approximately 10 cubic yards of soil. Post-excavation soil samples collected in the vicinity of the fill pipe were above applicable reportable concentrations. Following release notification, additional soil excavation was completed as a RAM. An additional 26 tons of soil were removed. Post-excavation soil sampling did not detect concentrations of EPH or VPH above applicable Method 1 S-1/GW-2/GW-3 standards. A Class A-2 RAO with a Method 1 risk characterization was submitted to DEP in September 2000. Contaminants of concern at the site were identified at concentrations below applicable soil and groundwater standards. (Clinton, 2-12939, July 3, 2001)
3. Following an audit of a Class A-3 RAO Statement and Activity & Use Limitation (AUL), DEP issued a NOAF/NON that identified violations in the actions audited. One AUL error requiring correction was also identified. DEP requested additional response actions to support the RAO.

The site is located within a property currently occupied by two 10-story condominium complexes. A river abuts the site to the north and a marine oil terminal and bulk oil distributor abuts the site to the west. The area surrounding the property is a mix of commercial/residential uses. From 1930 to 1984, the property was operated as a scrap yard. Active operations occurred in the vicinity of the current parking lot area. Scrap yard activities included sorting scrap metal, dumping heating oil and transformer oil into a pit, dipping metal into the oil, cutting transformers to retrieve copper, and burning of heating and transformer oil. The property was developed as condominiums in 1984. The "site" is defined as an 8,100 square foot area located beneath an asphalt-paved parking lot at the rear of the property. In 1983, an environmental assessment of the property was conducted, which included the advancement of one soil boring and three test pits. Testing for polychlorinated biphenyls (PCBs), volatile organic compounds (VOC), EP toxicity metals, pesticides, and herbicides was conducted. The assessment concluded that the property did not present a threat to the environment or contain hazardous materials. In 1986, anonymous phone calls were made to the city to report dumping and disposal on the property during construction activities. In addition, DEP received notification from the Coast Guard that a 2,000-gallon UST containing transformer oil, found during construction, was ruptured. DEP assigned spill number N86-1056. Approximately 90 cubic yards of oil-contaminated soil was removed. PCBs greater than 50 milligrams per kilogram (mg/kg) remained on site. DEP issued a Notice of Responsibility to the property owner. From 1987 to 1996, an environmental assessment of the site was conducted. Assessment included the installation of 32 test borings and 4 groundwater monitoring wells. PCBs were detected in soil up to 8,280 mg/kg and in groundwater up to 7.5 micrograms per liter (ug/L). In August 1995, the site was classified as Tier II. Additional groundwater samples were collected and nine soil borings installed in 1997. PCBs were not detected in the groundwater samples

(filtered). RAM activities were conducted from October to November 1997. RAM activities included the installation of 10 additional shallow soil borings and two monitoring wells. Approximately 515 cubic yards of soil were excavated and disposed via hazardous waste manifest. Post excavation soil samples identified PCBs up to 6 mg/kg. Groundwater samples (filtered) collected from five monitoring wells did not identify the presence of PCBs above applicable Method 1 standards. In May 1998, DEP received a Class A-3 RAO with a Method 3 risk characterization and an AUL. Impacted soil remains below the paved parking area. Permitted uses include parking, and equipment and material storage. The AUL is to be maintained in a manner that prevents direct contact with subsurface soils and ensures that the pavement within the AUL area is not disturbed. During a site inspection conducted in April 2001, DEP observed major cracks in the pavement large enough to support vegetation.

Findings

Identified violations of MCP requirements include:

- a. Failure to support risk characterization by a description of the source and extent of release of oil and/or hazardous materials including the horizontal and vertical extent, and concentrations of oil/hazardous material in all evaluated media; and
- b. Failure to adhere to the maintenance and obligation conditions of the AUL, which required maintenance of the pavement.

DEP determined that the AUL does not adequately define what uses and activities are restricted at the site, which is an error that requires correction. (Quincy, 3-0915, NON-NE-01-3A107, July 2, 2001)

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Enforcement - July 2001

In July 2001, DEP BWSC issued 47 NONs, 1 Administrative Consent Order (ACO), 3 Administrative Consent Orders with Penalty (ACOPs), 1 Unilateral Administrative Order (UAO), and 2 Standard Penalty Assessment Notices (SPANs). Enforcement actions of particular significance in July include:

1. DEP entered into an ACOP with Motiva Enterprises, LLC of Houston, TX, for failure to complete comprehensive response actions, comply with waiver provisions, and complete response actions agreed to in a third Tier II Extension request. A penalty of \$21,000 was assessed. Motiva Enterprises, LLC agreed to complete comprehensive response actions. (Attleboro, 4-0554, ACOP-SE-3T-01-002, July 20, 2001).
2. DEP issued a Demand for Payment letter in relation to an ACO and Standard Penalty Assessment Notice (SPAN) to Albert LaFluer of South Hadley for failure to comply with the ACO/SPAN concerning the assessment and/or cleanup of contamination at a property in Holyoke. Mr. LaFluer failed to submit a Response Action Outcome (RAO) or Tier Classification submittal by the one-year anniversary of a release at its property. A penalty of \$7,500 was assessed. Mr. LaFluer must also

submit a LSP Evaluation Opinion or a RAO by December 2001. (Holyoke, 1-0790, SPAN-WE-99-3T-3003-STP, July 16, 2001).

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Audit and Enforcement Update for August, 2001

Audit Findings for August 2001:

DEP BWSC issued 17 Notice of Audit Findings (NOAFs) in August 2001. NOAFs of particular significance in August include:

1. Following an audit of a Licensed Site Professional (LSP) Evaluation Opinion and Class B-1 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON).

The site is located at a gasoline sales property that has operated in this manner since at least 1920. In September 1986, two on-site 10,000-gallon gasoline underground storage tanks (USTs) failed a tightness test and gasoline-related compounds were detected in on-site groundwater monitoring wells. The source of the gasoline contamination in groundwater was attributed to historic overfills of the USTs. The USTs were replaced in 1988. An evaluation of soil or groundwater conditions during tank replacement activities was not conducted. In 1993, Non-Aqueous Phase Liquid (NAPL) was observed downgradient of the USTs in one monitoring well (MW-3). A Waiver of Approvals was granted for the site in January 1994. The Waiver included conditions to provide annual status reports, conduct Phase II response actions (including the installation of at least two additional downgradient monitoring wells), and conduct quarterly groundwater monitoring. Monitoring reports were received quarterly between 1993 and 1995. Annual Waiver reports were received in 1994 and 1995. In January 1994, installation of a passive product recovery bailer in MW-3 was proposed as an Interim Measure (IM). Documentation of how long it remained in the well was not provided, but minimal product recovery was reported in 1995. In March 1994, DEP received a Phase II Scope of Work that proposed the installation of two monitoring wells, additional sampling and laboratory analysis, and the preparation of a risk characterization. The additional wells were never completed and DEP did not receive a Phase II Comprehensive Site Assessment report. In February 1997, DEP received a Class B-1 RAO with a Method 1 risk characterization. The average concentration of ethylbenzene over the last four consecutive quarterly groundwater sampling rounds (January, April, July, and October 1995) exceeded the applicable Method 1 standard. No laboratory analysis of soil was conducted during response actions, and no soil Exposure Point Concentrations (EPCs) were developed.

Findings

Identified violations of MCP requirements include:

- a. Failure to conduct response actions in conformance with terms and conditions of DEP approvals;
 - b. Failure to support the RAO by assessments and evaluations, which are of sufficient scope, detail, level of effort to characterize the risk of harm to health, safety, public welfare, and the environment, and consistent with the Response Action Performance Standard (RAPS);
 - c. Failure to achieve a level of no significant risk (EPCs in groundwater are greater than applicable Method 1 standards);
 - d. Failure to define the nature and extent of release in all evaluated media for the risk characterization;
 - e. Failure to complete applicable Comprehensive Response Actions within required deadlines;
 - f. Failure to describe background conditions and the feasibility of reducing concentrations of oil & hazardous materials to background conditions; and
 - g. Failure to apply the correct RAO class [a Class B-1 RAO does not apply to a disposal site where one or more remedial actions (passive product recovery) have been conducted]. (Chicopee, 1-00044, NON-WE-3A071, August 14, 2001)
2. Following an audit of a Class B-2 RAO Statement and Activity & Use Limitation (AUL), DEP issued a NOAF & signed Administrative Consent Order with Penalty (ACOP) with the Potentially Responsible Party that identified violations in the actions audited, and assessed a penalty of \$4,500. One AUL error requiring correction was also identified. DEP requested additional response actions to support the RAO.

The site is located within an amusement park complex. In 1992, an evaluation of a closed-in-place gasoline UST was conducted. Elevated levels of contamination were detected in the vicinity of the tank and DEP was notified. Contamination was thought to have resulted from surface spillage. In May 1992, gasoline-contaminated soil was excavated under the direction of DEP. Soil removal was restricted due to the presence of underground utilities and a concrete support for a monorail system. No soil or groundwater samples were collected. During an assessment conducted in January 1997, another evaluation of the same closed-in-place UST was again conducted. A soil sample was collected adjacent to the tank and a monitoring well was installed to evaluate groundwater conditions. Analytical results indicated a release condition in both the soil and groundwater. A release notification form was submitted to DEP in May 1997. Additional soil, groundwater, and air sampling was conducted to define the extent of contamination. A method 2 risk characterization was prepared for the site in which soil EPCs were compared to the applicable Method 1 S-2/GW-2 and S-2/GW-3 standards, and were found to be below them. However, the concentrations of two Volatile Petroleum Hydrocarbon (VPH) fractions exceeded the applicable S-1 standards so an AUL was implemented to limit exposures to these soils. In June 1998, an AUL was recorded for the site, and in June 1998 DEP received a Class B-2 RAO. The AUL prohibits any change in use that results in access to the area by the general public and obliges the site owner to notify and consult with a LSP before undertaking any restricted activities or uses listed in the AUL. During a site inspection conducted in December 1999, DEP observed that the area in which the AUL is located has undergone reconstruction and is no longer inaccessible to the general public as described in the RAO. A follow-up inspection was conducted in April 2001. It was confirmed that a LSP Opinion was not completed before the change in site use.

Identified violations of MCP requirements include:

- a. Failure of owners and holders of interest(s) in the property to implement and adhere to the AUL;
- b. Failure to submit an LSP Opinion when a change in site activities or uses within the AUL area, not specifically permitted by the AUL, are contemplated;
- c. Failure to amend a AUL if, pursuant to the LSP Opinion, such an amendment is deemed necessary to maintain a condition of No Significant Risk; and
- d. Failure to apply the correct RAO class (a Class B-2 RAO does not apply to a disposal site where one or more remedial actions have been conducted).

DEP also determined that the AUL does not adequately define what uses are permitted at the site and what uses are restricted, which is an error that requires correction. DEP required that an LSP Opinion be submitted to evaluate the changed uses of the AUL area, and that an Amendment of Notice of AUL be recorded. In addition, the amusement park will provide key personnel with MCP training, develop a training manual, and revise its on-site excavation permit process to ensure the terms and conditions of the AUL are met in the future. (Agawam, 1-11854, ACOP-WE-01-3A006, August 16, 2001)

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Enforcement - August 2001

In August 2001, DEP BWSC issued 32 NONs, 4 Administrative Consent Orders (ACOs), and 7 Administrative Consent Orders with Penalty (ACOPs). Enforcement actions of particular significance in August include:

1. A Final Judgment by Consent was entered in Suffolk Superior Court in Commonwealth of Massachusetts v. Thompson, et al. This settlement resolves DEP cost recovery claims for cleanup of the "Panama Street" light industrial site in East Longmeadow. Soil and groundwater under the building, as well as a nearby brook, are contaminated with PCE. Three responsible parties will pay a combined \$350,000 (with the potential to pay another \$50,000 under certain future contingencies) to complete assessment and cleanup of the site. DEP will perform or direct further response actions, which will include excavating and removing contaminated soil. (East Longmeadow, 1-0673, August 1, 2001).
2. DEP entered into an ACOP with Sunoco, Inc., for failure to complete comprehensive response actions at its property in Hanover. A penalty of \$10,000 was assessed. Sunoco agreed to complete comprehensive response actions and will also make a voluntary donation of \$5,000 to the Massachusetts Environmental Trust. (Hanover, 4-0965, ACOP-SE-01-3P-006-SEP, August 17, 2001).
3. DEP entered into an ACOP with Exxon Mobil Corp., for failure to notify DEP of three separate petroleum releases at service stations on the Massachusetts Turnpike, and for conducting response actions that did not comply with the state's waste site assessment and cleanup regulations. A penalty of \$25,000 was assessed. Exxon Mobil Corp. agreed to \$25,000. (Charlton, Westborough, 2-0401, 2-12636 and 2-

13001, ACOP-CE-01-3020, August 29, 2001).

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Audit and Enforcement Update for September, 2001

Audit Findings for September 2001:

DEP BWSC issued seven Notice of Audit Findings (NOAFs) in September 2001. NOAFs of particular significance in September include:

1. Following an audit of a Class C Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON). DEP requested additional response actions.

The site is located at a self-serve gasoline sales property. In September 1988, DEP was notified when an underground storage tank (UST) failed a tightness test. In January 1995, a second UST failed a tightness test and DEP was notified. In response to the second notification, DEP approved an Immediate Response Action (IRA) for the removal of up to 400 cubic yards of contaminated soils. In April 1995, an IRA Completion Statement documented the removal of up to 190 tons of impacted soil from the site. The site, incorporating both release conditions, was classified as a Tier II disposal site in January 1996. A small brook is located approximately 350 feet southwest of the site and a river is located approximately 500 feet east of the site. A Phase II Comprehensive Site Assessment was completed in October 1997. The nature and extent of contamination was investigated through the installation of soil borings and monitoring wells, and laboratory analysis of soil and groundwater samples for gasoline-related constituents. Groundwater contamination was below applicable GW-2 and GW-3 standards. Soil contamination exceeded Method 1 S-1 standards and Upper Concentration Limits (UCLs) beneath the existing pump island and concrete apron. In October 1998, DEP received a Phase III Remedial Action Plan that selected natural attenuation with long-term monitoring as the remedial alternative for the site. In September 1999, DEP received a Class C RAO. According to the RAO, the release was attributed to failed underground product distribution lines. The report concluded that no substantial hazard exists at the site.

Findings

Identified violations of MCP requirements include:

- a. Failure to provide content of Response Action Outcome Statement. [The conclusion that "all substantial hazards have been eliminated" was not supported, and a plan documenting definitive and enterprising steps toward

achievement of a Permanent Solution was not provided.]

- b. Failure to support the selection of a preferred remedial action alternative. [The selection of Monitored Natural Attenuation (MNA) was not appropriate since primary lines of evidence (demonstration of stable or shrinking plume), secondary line of evidence (dissolved oxygen levels and other monitoring demonstrating a destruction of contaminants), and a demonstration that MNA is a cost-effective and timely remedial alternative were not provided in sufficient detail.]

DEP requested submittal of a revised Phase III report, which would include all technical information necessary to support selection of the remedial action alternative, and revision of the RAO. (Southbridge, 2-10623, NON-CE-01-3075, September 21, 2001)

2. Following an audit of a Class A-2 RAO Statement, DEP issued a NOAF/NON. DEP requested additional response actions to support the RAO through a written Audit Follow-up Plan.

The site is located within an automobile sales and service facility that was formerly used as a gasoline station from 1955 to 1986. The property abuts a wetland to the northwest. Surrounding properties are commercial and industrial. Petroleum and chlorinated solvent releases were discovered during a property transfer assessment conducted in April 1986. Polychlorinated biphenyls (PCBs) were also detected in soil. Three gasoline, one fuel-oil, and one waste-oil UST, as well as a drywell were removed from the site in 1986. Approximately 15 cubic yards of gasoline-impacted soil, 18 drums of impacted soil from the drywell, and 29 drums of waste-oil impacted soil were disposed off site. Four monitoring wells were installed in 1986; one was installed in the abutting wetland. The site was listed as a confirmed disposal site in 1987. The monitoring wells were sampled in 1986 and October 1998. One well was sampled again in December 1998. The wetland well was only sampled in 1986. In September 2000, DEP received a Class A-2 RAO with a Method 1 risk characterization. The RAO describes the site as "coterminous" with the property. However, the wetland is located on an abutting property. Groundwater at the site was classified as GW-2 and GW-3. Soil was not classified. Groundwater sampling conducted in 1998 detected concentrations of Total Petroleum Hydrocarbons (TPH) above applicable Method 1 GW-2 standards, but below applicable GW-3 standards. Volatile Organic Compounds (VOC) were not detected above either GW-2 or GW-3 standards in 1998. Chlorinated solvent compounds were detected in the groundwater samples collected from the wetland in 1986. Sampling of groundwater, surface water, or sediment was not conducted in the wetland in 1998 before the RAO was submitted. A concentration of 6.9 parts per million (ppm) PCB was detected in soil from the waste-oil excavation in 1986. Soil exposure point concentrations were not determined or presented in the risk characterization with the RAO.

Identified violations of MCP requirements include:

- a. Failure to obtain site information required for risk characterization.
- b. Failure to demonstrate a condition of No Significant Risk (TPH exceeding Method 1 GW-2 standards.), and

- c. Failure to comply with general provisions for RAOs (It is unclear if floor drains to the former drywell have been sealed to eliminate or control a source of release. The boundary of the disposal site was not accurately delineated). (Grafton, 2-00051, NON-CE-01-3072, September 12, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address: <http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - September 2001

In September 2001, DEP BWSC issued 15 NONs, 1 Administrative Consent Order (ACO), and 1 Penalty Assessment Notice (PAN). Enforcement actions of particular significance include:

1. DEP entered into an ACO with Circle K Stores, Inc. of Linden, New Jersey for failure to complete comprehensive response actions at its property in Bellingham. Circle K agreed to complete comprehensive response actions within specific deadlines or be liable for penalties if it does not. (Bellingham, 2-00849, ACO-CE-01-3013, September 28, 2001).
2. DEP issued a NOAF/NON in April 2001 that requested additional work to identify the source of the release and to define the extent of contamination following an audit of a Class A-3 RAO. The additional work conducted in response to the NOAF/NON did not support the original LSP Opinion that a condition of No Significant Risk had been achieved at the site. Exceedences of the applicable Method 1 groundwater standard existed. Therefore, as a result of the additional work, DEP determined the RAO submittal not to be valid. In a letter dated October 18, 2001, DEP requested that further assessment and/or remediation be performed at the site until a level of No Significant Risk can be adequately documented. DEP denied a request to continue to extend a deadline to conduct additional work to support the original RAO without the RAO first being taken off the record. (North Adams, 1-11332, NON-WE-3A005, October 18, 2001).

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Audit and Enforcement Update for October, 2001

Audit Findings for October 2001:

DEP BWSC issued 11 Notices of Audit Findings (NOAFs) in October 2001. NOAFs of particular significance in October include:

1. Following an audit of a Release Abatement Measure (RAM) and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON). DEP requested additional response actions.

The site is located at a residential property in a rural/residential/agricultural area. The property is served by a private potable water supply well. Two additional private wells are located within 500 feet of the site. In May 1999, DEP received a 120-day notification of petroleum-impacted soil documented during removal of a former # 2 fuel-oil underground storage tank (UST). Response actions commenced at the site as a Limited Removal Action (LRA). Subsurface investigations included the installation of four monitoring wells and subsequent over-boring of two of the wells to bedrock monitoring wells. Groundwater samples collected from a bedrock well contained petroleum contamination above applicable GW-1 reportable concentrations. The bedrock well is located within 500 feet of the potable well. In October 1999, a Release Abatement Measure (RAM) Plan was submitted for continued soil excavation and removal, and treatment of contaminated groundwater from the UST grave. The RAM was approved and implemented. Soil removal beneath the house was also completed by underpinning the foundation. A total of 60 cubic yards of contaminated soil was removed. Nineteen post-excavation soil samples were collected from within the basement and the former UST grave excavation. Indoor air samples were consistent with the background air sample collected outside the house. The second of two potable well water samples tested for Extractable Petroleum Hydrocarbons (EPH) detected 0.094 milligrams per liter (mg/L) of C11-C22 aromatics. In June 2000, a Phase I Report and Numerical Ranking Scoresheet (NRS) supporting a Tier II site classification was submitted to DEP. In July 2000, DEP received a RAM Completion report/Class A-2 RAO Statement. A combined Method 2/3 Risk characterization was conducted. An evaluation of the potential for volatilization of contaminants from groundwater into indoor air was also conducted. The risk characterization evaluated hydrocarbon risk by breaking the hydrocarbon fractional data into 5 aliphatic and 3 aromatic fractions and calculating the risks posed by the 8 fractions separately. The C9-C10 aromatic hydrocarbon was excluded from the calculation. Only 8 of the 19 post-excavation

samples collected from the basement were used to calculate soil Exposure Point Concentrations (EPCs). Hydrocarbons detected in the potable drinking water well, as well as 2-methylnaphthalene, xylenes & C9-C10 aromatic hydrocarbons in soil, were not evaluated in the risk characterization.

Findings

Identified violations of MCP requirements, which required further action include:

- a. Failure to support the RAO with assessments and evaluations of sufficient scope, detail, and level of effort to characterize risk. (Additional sampling of potable well necessary)
- b. Failure to describe all probable Exposure Pathways (Potable water supply well)
- c. Failure to identify EPCs for each oil and/or hazardous material in each medium at each Exposure Point.
- d. Failure to identify a conservative estimate of the EPC.

DEP requested either the submission of a revised RAO Statement that complies with the requirements of the MCP, or retraction of the existing RAO Statement. (Belchertown, 1-12960, NON-WE-01-3A107, October 3, 2001)

2. Following an audit of a Class A-3 RAO and Activity & Use Limitation (AUL), DEP issued a NOAF/NON. One AUL error requiring correction was also identified.

The site is located at a large industrial property with a building facility occupied by three companies, which together manufacture furniture. The furniture manufacturing includes electroplating metal parts. On site underground petroleum storage included No. 6 fuel oil and gasoline. According to a 1985 report, nickel sulfamate and zinc cyanide were used in the electroplating process. In addition, historical degreasing of metal parts was conducted. The facility contains several plating tanks consisting of individual vats for plating solutions. A trough system within the building was used to drain the tanks into the sanitary sewer system. Several groundwater monitoring wells installed at the site and volatile organic compounds (VOCs) and metals were identified in groundwater. A 1986 report indicated that the former wastewater drainage trenches in the southern end of the plating building leaked contaminants into the subsurface environment. According to DEP RCRA Hazardous Waste files, the No. 6 fuel oil UST was removed in 1986. Soil contamination and separate -phase oil was observed during the UST excavation. During the installation of a required plating solution treatment system in 1985, soil contaminated with cyanide, zinc, and nickel was encountered.

In August 1995, DEP received a Class A-3 RAO with a method 3 risk characterization and AUL. The RAO does not identify and investigate sources of contamination at the site, including the former drainage trenches within the building, an exterior hazardous waste storage area, or the current/former petroleum USTs. The RAO indicates that approximately 638 cubic yards of contaminated soils were removed and disposed. The risk characterization does not include cyanide and petroleum hydrocarbons as contaminants of concern at the site.

Findings

Identified violations of MCP requirements include:

- a. Failure to complete an adequate characterization of the disposal site to characterize risk.
- b. Failure to support the RAO with assessments and evaluations of sufficient scope, detail, and level of effort to characterize risk, and
- c. Failure to evaluate the feasibility of reducing contaminant concentrations at the site to background.

DEP also determined that the AUL does not adequately define what uses and activities are permitted at the site, what uses and activities are restricted, or what obligations and conditions must be maintained at the site, which is an error that requires correction. DEP requested either the submission of a revised RAO Statement that complies with the requirements of the MCP (including the results of additional groundwater sampling, delineation of the extent of contamination, and identification of any remaining on-site sources of contamination) or retraction of the existing RAO Statement. (Worcester, 2-0178, NON-CE-01-3069, October 11, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address: <http://www.state.ma.us/dep/bwsc/audits.htm>.

Enforcement - October 2001

In October 2001, DEP BWSC issued 23 NONs, 7 Administrative Consent Orders (ACOs), 4 Administrative Consent Orders with Penalty (ACOPs), and 1 Unilateral Administrative Order (UAO). Enforcement actions of particular significance include:

1. DEP issued a Standard Penalty Assessment Notice (SPAN) and Unilateral Administrative Order (UAO) to Joseph DiMaggio of Mashpee for failure to complete cleanup actions in a timely manner, including failure to submit a Response Action Outcome (RAO) or Tier Classification submittal by the one-year anniversary of a release at his property. The UAO orders Joseph DiMaggio to perform response actions and comply with MCP submittal requirements. A penalty of \$7,000 was assessed. (Mashpee, 4-14286, SPAN-SE-01-3T-003, UAO-SE-01-3T-003, October 5, 2001).
2. DEP entered into an ACOP with Construction Services, Inc. for failure to complete MCP response actions addressing oil contamination of soil and groundwater from leaking underground storage tanks at its property in Wilbraham. The site is a large gravel pit and construction equipment service and storage area located over a potentially productive aquifer. A penalty of \$2,500 was assessed. Construction Services, Inc. agreed to complete response actions and submit required reports within specific deadlines. (Wilbraham, 1-00956, 1-11084, ACOP-WE-01-3011, October 31, 2001).

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Audit and Enforcement Update for November and December, 2001

Audit Findings for November and December 2001:

DEP BWSC issued 27 Notices of Audit Findings (NOAFs) in November and December 2001. NOAFs of particular significance in November and December include:

1. Following an audit of an Immediate Response Action (IRA), Phase I-Initial Site Investigation (PHI), Phase II Comprehensive Site Assessment (PHII), and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON). DEP requested additional response actions.

The site is located at a combination retail gasoline dispensing station and convenience store located in a mixed commercial and residential section of town. The facility has been a gasoline station since 1947. A river is located within 500 feet of the property. In April 1997, a release of gasoline to the environment was encountered when four underground storage tanks on the property were being removed. An immediate response action (IRA) was conducted including excavating and removing 660 tons of soil, and dewatering and treating 7,800 gallons of groundwater. Four post-excavation soil samples were collected from the base of the excavation for analysis of Extractable Petroleum Hydrocarbons (EPH). Analysis for Volatile Petroleum Hydrocarbons (VPH) or Volatile Organic Compounds (VOCs) was not performed on the post-excavation samples. Sidewall samples could not be collected due to the presence of sheet piling. Three soil borings/monitoring wells were installed in the vicinity of the excavation (100 feet upgradient, crossgradient, and 35 feet downgradient) and both soil and groundwater media were sampled for VPH and EPH; one well was also analyzed for lead. A combined IRA Completion Statement, PHI report, and Tier Classification were submitted to DEP in May 1998. As part of the PHII response actions, two additional soil borings/monitoring wells were installed and sampled, a slug test was conducted to determine local hydraulic conductivity, and indoor air impacts were evaluated through soil gas measurement from two soil borings within the convenience store building. Groundwater velocity was measured at 0.13 feet per day. Soil gas Photoionization detector reading (PID) were 0.3 and 0.4 parts per million (ppm). The PHII report stated that these PID readings were not considered to constitute a significant risk of indoor air impacts.

In May 2000, DEP received a combination PHII report and Class A-2 RAO with a Method 1 & 2 risk characterization. Groundwater Exposure Point Concentrations

(EPCs) for two VPH fractions exceeded the applicable GW-3 Method 1 standards and one VPH fraction exhibited an increasing trend over the monitoring period. A groundwater transport model was used to evaluate potential discharges to the nearby river. The model predicted that peak discharges would be below GW-3 standards.

Findings

DEP identified the following violations of the Massachusetts Contingency Plan (MCP) that require follow-up:

- a. An increasing trend of VPH fraction concentrations in groundwater, as well as, insufficient post-excavation soil data indicated to DEP that the requirement to eliminate or control each source of release in order to achieve an RAO was not met, and
- b. The lack of evaluation of soil where the highest residual impacts were likely to be found, and no VPH analysis on post-excavation samples indicated to DEP that the requirement to support the RAO by assessments of sufficient scope, detail, and level of effort to characterize risk had not been met.

DEP requested results of an additional groundwater and soil evaluation with a revised risk characterization. Depending on the outcome of the additional assessment and evaluation, the RAO shall be supported, revised, or retracted. (Stockbridge, 1-11800, NON-WE-01-3A139, November 20, 2001)

2. Following an audit of an IRA and Class A-2 RAO Statement, DEP issued a NOAF determining that response actions were performed in compliance with the requirements of the MCP, and that the information submitted to the DEP adequately documented those actions.

The site is located at a petroleum service station. In December 1999, DEP received a 2-hour notification of a sudden release to the ground surface of approximately 10 gallons of No. 2 fuel oil from a failed oil delivery truck rear pump seal. DEP approved IRA activities, including the use of absorbent material and excavation of 5 cubic yards of soil. Excavation of soil began in January 2000 and DEP approved an increase to 10 cubic yards. Contaminated soils and absorbent materials were transported off site for disposal. Confirmatory soil samples were obtained from the limits of the soil removal and analyzed for VPH, EPH, and lead. EPCs developed from the analytical results were below applicable Method 1 soil standards. Groundwater media was not evaluated, because the release was a sudden limited surface release. In February 2000, DEP received a Class A-2 RAO Statement. (Worcester, 2-13105, December 5, 2001)

3. Following an audit of a Class A-1 RAO Statement, DEP issued a NOAF/NON. DEP determined that the RAO was not valid and requested additional response actions.

The site is located at a town public works facility surrounded by residential and undeveloped properties. A one-story office building and office trailer are located on the property. The facility is used as a central fuel depot for town vehicles. In October 1998, a release of gasoline to the environment was encountered during removal of a 2,000 gallon No. 2 fuel oil UST and a 5,000-gallon gasoline UST. The release was reported to DEP, which approved an IRA for the removal of 100 cubic yards of contaminated soil. Following soil excavation, post excavation soil samples were

collected from sidewalls and the bottom of both the fuel oil and gasoline UST excavations. Fuel oil UST excavation samples were evaluated for EPH, VPH, and polycyclic aromatic hydrocarbons (PAHs). Gasoline UST excavation samples were evaluated for VPH, and select VOCs. Assessment of the site was conducted through the installation of seven soil borings, three monitoring wells, and test pits. Soil samples were collected from the soil borings and test pits for analysis. Groundwater samples were collected from all three wells in May 1999. A second sample was collected from MW-6 in July 1999. In October 1999, DEP received an IRA Completion Statement and Class A-1 RAO Statement with a Method 1 risk characterization. Soil at the site was classified as S-3 and groundwater was classified as GW-2. Calculation of soil EPCs did not include results of post excavation samples. Technical justification for why these samples were omitted from the EPC calculation was not provided. EPCs in groundwater at the site were calculated using data from both groundwater sampling events. The IRAC/Class A-1 RAO report stated that "the EPC for groundwater at MW-6 is above the Method 1 C9-C12 Aliphatic Standard and as such a condition of No Significant Risk does not exist for groundwater in the vicinity of the release at the site". The RAO concluded that no soil or groundwater concentrations above the applicable Method 1 standards were detected in the area of the former 5,000-gallon gasoline UST. The RAO concluded that contamination was present in one groundwater sample that "just exceeded" the Method 1 Standards in the area of the former 2,000 gallon No. 2 fuel oil UST. The RAO also stated that this contamination was expected to decrease due to natural attenuation.

Findings

DEP identified the following violations of the MCP that require follow-up:

- a. Groundwater at the site was not classified as GW-3. Groundwater at all disposal sites in Massachusetts shall be considered a potential source of discharge to surface water and shall be categorized, at a minimum, as category GW-3,
- b. The nature and extent of the release of gasoline and No. 2 fuel oil to the subsurface was not completely delineated. Gasoline constituents were detected in excavation closure samples that exceed Method 1 standards, and dissolved fuel oil constituents were detected in groundwater exceeding the Method 1 standards.
- c. The calculation of the Exposure Point Concentrations (EPCs) for soil did not include closure samples collected from the fuel oil tank and gasoline tank excavations. Justification for their elimination was not provided indicating to DEP that an EPC for each oil and/or hazardous material in each medium, was not identified nor was a conservative estimate of the arithmetic mean concentration contracted by a receptor at the Exposure Point.
- d. The RAO filed for the site does not meet the requirements of a Class A-1 RAO. Levels of contaminants at the site have not been reduced to background concentrations and groundwater contaminants exceed GW-2 indicating to DEP that the RAO is not supported by assessments and evaluations, which demonstrate that all requirements of a RAO have been met.

DEP determined the Class A-1 RAO to be in non-compliance and not valid because concentrations of oil at the site were both above background levels and risk-based standards. Additional actions must be conducted until an RAO can be adequately achieved. (North Attleboro, 4-14281 & 4-14273, NON-SE-01-3A032, December 28, 2001)

Additional information on the DEP's audit program can be found on our web page at the following address: <http://mass.gov/dep/bwsc/audits.htm>.

Enforcement - November and December 2001

In November and December 2001, DEP BWSC issued 49 NONs, 4 Administrative Consent Orders (ACOs), 14 Administrative Consent Orders with Penalty (ACOPs), and 2 Penalty Assessment Notices (PANs). Enforcement actions of particular significance include:

1. DEP entered into an ACOP with C.K. Smith & Co., Inc. for failure to comply with a Notice of Noncompliance that required proof that response actions to address a release condition at a property in Westport were conducted in accordance with the MCP and the Tier 1B Permit. A penalty of \$16,500 was assessed. C.K. Smith & Co., Inc. agreed to complete response actions and submit required reports within specific deadlines. (Westport, November 7, 2001).
2. DEP issued a \$22,000 PAN to Curve In, Inc. for failure to conduct response actions for a release of gasoline and to submit a Release Notification Form, Tier Classification, and a Response Action Outcome statement within one year of the release at its property in Winchendon. (Winchendon, 2-12451, PAN-CE-01-3026, November 8, 2001).
3. DEP entered into an ACOP with Village Mall Realty, Inc. for failure to conduct an Immediate Response Action (IRA) in accordance with DEP approvals, submit initial and subsequent IRA status reports, complete tier classification, submit an audit follow-up plan, respond to a Public Involvement Plan (PIP) petition, and correctly score numerical ranking scoresheets at its property in Princeton. A penalty of \$12,350 was assessed. Village Mall Realty, Inc. agreed to complete response actions and submit required reports within specific deadlines. (Princeton, 2-00951 & 2-12072, ACOP-CE-01-3026, December 10, 2001)
4. DEP and the Attorney General finalized an agreement with past and present owners of the former Greenfield Tap & Die site in Greenfield that will facilitate redevelopment of this abandoned industrial property. In an ACO with Greenfield Industries, Inc., TRW, Inc., and the Town of Greenfield, the companies and the town agreed to resolve their liability to the Commonwealth for past costs and fees in exchange for liability protection for releases of oil and hazardous materials at the site. The parties also agreed to complete cleanup at the site. The agreement will ensure that this contamination is remediated and the site redeveloped for beneficial uses. (Greenfield, December 12, 2001)

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